

having a thickness of 1 to 9 nm and a width of 50 to 70 nm, and a method of producing bacterial cellulose which comprises culturing cellulose-producing bacteria which produce the bacterial cellulose extracellularly in a culture medium containing an organic reducing agent, and recovering the bacterial cellulose produced in the culture medium.--

Please replace the paragraph at column 2, line 63 to column 3, line 6 with the following:

--The bacterial cellulose of the invention comprises ribbon-shaped microfibrils having a minor axis of 1 to 9 nm and a major axis of 160 to 1000 nm or 50 to 70 nm. The inventors cultured cellulose producing bacteria (*Acetobacter pasteurianus* FERM BP-4176) in a culture medium without containing cell division inhibitor and organic reducing agent, and the size of the microfibrils of the bacterial cellulose was measured. As a result, the microfibril had a minor axis of 1 to 9 nm and a major axis of 80 to 150 nm. Accordingly, the bacterial cellulose of the invention is clearly different from conventional bacterial cellulose.--

Please replace the paragraph at column 3, lines 7-13, with the following:

--The minor axis of microfibrils is 1 to 9 nm irrespective of the bacterial cellulose of the invention obtained by culturing in a culture medium containing a cell division inhibitor or an organic reducing agent or conventional bacterial cellulose obtained by culturing in a culture medium not containing cell division inhibitor and organic reducing agent.--

Please replace the paragraph at column 3, lines 14-28, with the following:

--On the other hand, the major axis of the microfibrils of the bacterial cellulose obtained by culturing in a culture medium containing a cell division inhibitor is, in general, 160 to 700 nm, particularly 170 to 600 nm, occasionally longer size, e.g. 1000 nm. That is, the major axis is considerably greater compared with conventional major axis of 80 to 150 nm. When a culture medium contains a cell division inhibitor, cellulose-producing bacteria

are lengthened, and it is observed that a plurality of single chains are adhered to each other to form a bundle. The bundle can be deemed single chain, and accordingly, the major axis becomes considerably longer than conventional one. The ratio of major axis minor axis is about 28:1.0 to 1000:1, particularly, 28:1.0 to 280:1

Please replace the paragraph at column 3, lines 29-35, with the following:

--In the case of the bacterial cellulose obtained by culturing in a culture medium containing an organic reducing agent, the major axis of the microfibrils is, in general, 50 to 70 nm, and it is difficult to discriminate the major axis and the minor axis. It is considered to be caused by shortening of bacterial cell.--

Please replace the paragraph at column 7, lines 6-16, with the following:

--The ribbon-shaped microfibrils produced in NA-added media were observed by the electron microscope and the atomic force microscope, and found that the major axes (width) was great, e.g. 170 nm, 340 nm, 430 nm, 590 nm, etc. , but the minor axes (thickness) were in the range of 1 to 9 nm, e.g., 2.5 nm, 3 nm, 6 nm, 9 nm etc. On the other hand, the ribbon-shaped microfibrils produced in no NA added medium had a major axis (width) of 82 nm, 107 nm, etc and a minor axis (thickness) in the range of 1 to 9 nm, and significant variation was not observed compared with NA added medium concerning the minor axis.--

Please replace the paragraph at column 8, lines 38-48, with the following:

--The CP ribbon-shaped microfibrils produced in NA-added media were observed by the electron microscope and the atomic force microscope, and found that the major axes (width) was great, e.g. 160 nm, 330 nm, 450 nm, 570 nm, 690 nm, etc., but the minor axes (thickness) were in the range of 1 to 9 nm. On the other hand, the ribbon-shaped microfibrils produced in no CP added medium had a major axis (width) of 82 nm, 107 nm, etc and a

minor axis (thickness) in the range of 1 to 9 nm, and significant variation was not observed compared with CP added medium concerning the minor axis.--

Please replace the paragraph at column 9, lines 39-50, with the following:

--The DTT ribbon-shaped microfibrils produced in NA-added media were observed by the electron microscope and the atomic force microscope, and found that the major axes (width) was small, e.g. 56 nm, 57 nm, 70 nm, etc., but the minor axes (thickness) were in the range of 1 to 9 nm. On the other hand, the ribbon-shaped microfibrils produced in no DTT added medium had a major axis (width) of 82 nm, 107 nm, etc and a minor axis (thickness) in the range of 1 to 9 nm, and significant variation was not observed compared with DTT added medium concerning the minor axis.--

Please replace the Abstract with the substitute Abstract attached hereto.

IN THE CLAIMS

Please cancel Claims 4, 5 and 6.

Please amend the claims as follows. For the Examiner's convenience, all of the pending claims are reproduced below.

--1. (Amended) A bacterial cellulose comprising microfibrils having a thickness of 1 to 9 nm and a width of 250 to 1000 nm.

2. (Amended) The bacterial cellulose of claim 1, wherein the microfibrils have a width of 250 to 700 nm.

3. (Amended) The bacterial cellulose of claim 1, wherein the microfibrils have a width of 250 to 600 nm.

7. The bacterial cellulose of claim 1, wherein the microfibrils are ribbon-shaped.